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PYTHIUM ROOT ROT OF POTHOS

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Pothos (Scindapsus aureus Engler) is a popular ornamental foliage plant used in hanging baskets and/or as a vine for totem poles. In geographic areas protected from freezing temperatures, this plant has been used as a ground cover or vine, sometimes climbing high into large trees.

One of the more common diseases of pothos is a root and stem rot caused by Pythium splendens Braun (5). Other soil-borne pathogens of pothos include Rhizoctonia sp. (9), Erwinia carotovora (Jones) Bergey et al. (6, 8), and Meloidogyne sp. (3).

SYMPTOMS. Cuttings of pothos may show a bright yellowing of the parent leaf soon after infection by _P. splendens (fig. 1). Infection appears to be initiated through the cut basal stem surface and/or nodal areas where the aerial rootlets arise. Infected stems, under optimal conditions for disease development, may completely rot within several days after planting. In severe cases, the characteristic brown to black decay will progress into the petiole and lamina of the parent leaf (5). The emerging shoot and growing point may rot and die if infection of the cutting occurs at a later stage in the propagation cycle. Infected roots of cuttings or potted plants display a characteristic black decay, may become completely necrotic and often leave only the inner stele after the outer cortex sloughs away (fig. 1).

Fig. 1. Pythium root rot of Scindapsus aureus: Healthy rooted cutting (left) and diseased cutting (right).

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Infected stock plants of P. aureus appear chlorotic with reduced leaf size. Pronounced wilting of the plant may occur with a necrotic stem rot extending above the soil line (4).

HOST RANGE. Pythium splendens is worldwide in distribution (2,11) and has been detected in many ornamental hosts in Florida including Aglaonema spp., Brassaia actinophylla Endl, Caladium sp., Chamaedorea elegans Mart., Chrysalidocarpus lutescens Wendl., Dieffenbachia spp., Hedera helix L., Monstera deliciosa Liebm., Pelargonium spp., Peperomia spp., Philodendron panduraeforme Kunth., Pilea spp., and Syngonium spp. (1,4,10,12).

CONTROL. The soil fungicides Truban 30WP and Banrot 40WP have given excellent control of this disease when used as a drench or incorporated into the soil mix according to the manufacturer's recommendations (5). Where cutting decay is caused by the combination of the pathogens _P. splendens and E. carotovora, Dexon 35WP has given effective control as a pre-plant or post-plant drench in propagation beds or as a pre-plant dip.

Drenches should be applied at the rate of 1-2 pints per sq ft. The rate varies with pot size, depth, and composition of the propagative medium, and it is suggested that repeat drenches be applied no sooner than every 3 months (7).

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